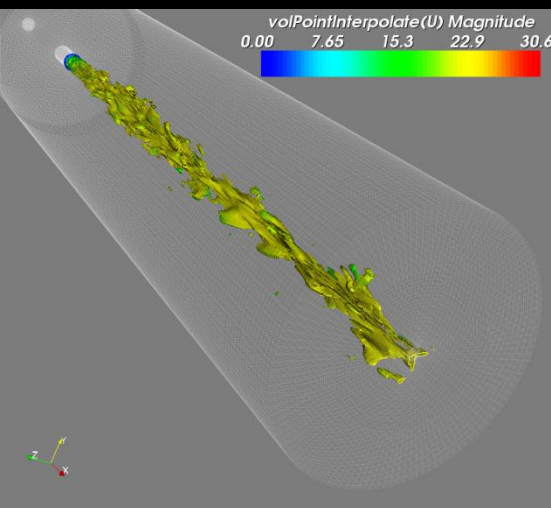
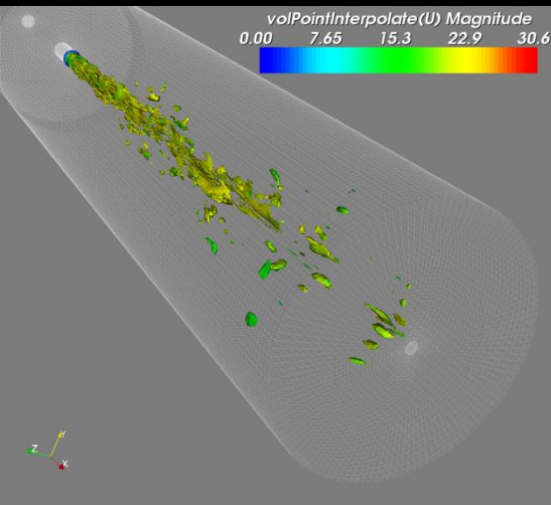


液体水素ピンホール漏えいジェット流の微粒化過程に関する融合数値シミュレーション

- Precise research on the liquid atomization of cryogenic fluids such as liquid hydrogen LH₂ is essential for the basic design of many aerospace devices such as highly pressurized vessels for liquid fuel.

- When a large amount of liquid hydrogen is utilized as a propellant of liquid fuel rocket engines, the fuel cell powered vehicles (FCV), as well as of other related aerospace technological devices, a serious problem is not only the atomizing jet mechanism of the fuel injection nozzle, but also the closely related **pinhole leakage of liquid hydrogen from the storage tank** and explosion of gaseous hydrogen generated by the release of the atomizing liquid hydrogen jet.

- For safe design and planning, it is necessary to investigate the atomization process of liquid hydrogen, as well as to evaluate the evaporation loss and boil-off loss of the hydrogen vapor cloud, accurately.



Volume fraction contours